

AMENDMENTS TO THE CLAIMS:

Complete Listing of Claims

Claims 1 - 3 (canceled)

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Claim ¹~~4~~ (currently amended) A system for signal processing, comprising:
a compensation system configured to provide a digitally compensated
representation of a first amplified analog signal indicative of a first parameter
based on a digital representation of the first amplified analog signal and a digital
representation of a second signal indicative of a second parameter, the digitally
compensated representation of the first amplified analog signal being determined
by applying a pre-stored compensation factor to an offset adjustment calculation
for the second parameter to provide a compensated offset adjustment, the
compensated offset adjustment being combined with an adjusted gain to provide
offset and gain correction for weighting the first parameter to provide the digitally
compensated representation of the first parameter; and ~~The system of claim 1,~~
further comprising

a scaling component that scales the digital representation of the first amplified analog signal to a first scale and scales the digital representation of the second signal to a second scale, the compensation system converting at least one of the digital representation of the first amplified analog signal and the digital representation of the second signal to a scale that is compatible with the first and second scales.

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Claim ~~5~~ (original) The system of claim ¹~~4~~, the compensation system converting the offset and gain correction to an output scale that is different from the first and second scales.

Claims 6 - 13 (canceled)

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Claim ~~14~~³ (currently amended) A compensation system that implements offset and gain correction for an analog circuit, comprising:

a first register that stores a temperature compensation factor based on a digital representation of a temperature and a temperature compensation coefficient;

a second register that stores an offset adjustment calculation from a digital representation of an amplified signal and a fine offset coefficient; and

a processor that produces a temperature compensated offset adjustment based on the temperature compensation factor and the offset adjustment, the processor storing the temperature compensated offset adjustment in one of the first and second registers, the other of the first and second registers storing a calculated temperature adjusted gain based on the digital representation of the temperature, and a gain coefficient, the processor employing the temperature adjusted gain and the temperature compensated offset adjustment to provide an offset and gain correction, wherein ~~The compensation system of claim 12, the digital representation of the amplified signal is scaled to a first scale and the digital representation of a temperature is scaled to a second scale, the processor converting at least one of the digital representation of the first amplified analog signal and the digital representation of the temperature to a compatible scale.~~

Claims 15 - 18 (canceled)

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Claim ~~19~~ (currently amended) A system for signal processing, comprising:
means for providing a digital representation of a first amplified analog
signal indicative of a first parameter;
means for providing a digital representation of a second analog signal
indicative of a second parameter;
means for applying a pre-stored compensation factor to an offset
adjustment calculation employing the second parameter to provide a
compensated offset adjustment;
means for determining an adjusted gain based on a prestored gain factor
and the second parameter;
means for combining the compensated offset adjustment with the
adjusted gain to provide offset and gain correction; and means for weighting the
first parameter employing the offset and gain correction to provide a digitally
compensated representation of the first parameter; ~~The system of claim 18,~~
~~further comprising~~
means for scaling the digital representation of the first amplified analog
signal to a first scale and for scaling the digital representation of the second
analog signal to a second scale; and
means for converting at least one of the digital representation of the first
amplified analog signal and the digital representation of the second analog signal
to a scale that is compatible with at least one of the first and second scales.

Claims 20 - 22 (canceled)

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Claim 23 (currently amended) A method for compensating for error in an analog amplifier, comprising:

determining a temperature compensation factor based on a digital representation of a temperature and a temperature compensation coefficient;

determining an offset adjustment for a digital representation of an analog amplifier signal based on a fine offset coefficient;

determining a temperature adjusted gain for the amplifier based on the digital representation of a temperature and a gain coefficient;

determining an offset and gain correction based on the temperature compensation factor, the offset adjustment, and the temperature adjusted gain;
and The method of claim 21, further comprising

scaling the temperature compensation factor to match the scale of the offset adjustment.

Claim 24 (canceled)

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Claim 25 (currently amended) A method for compensating for error in an analog amplifier, comprising:

determining a temperature compensation factor based on a digital representation of a temperature and a temperature compensation coefficient;

determining an offset adjustment for a digital representation of an analog amplifier signal based on a fine offset coefficient;

determining a temperature adjusted gain for the amplifier based on the digital representation of a temperature and a gain coefficient;

determining an offset and gain correction based on the temperature compensation factor, the offset adjustment, and the temperature adjusted gain;
and The method of claim 21, further comprising

storing the temperature compensation factor in a first register, and storing the offset adjustment in a second register.

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Claim ~~26~~ (original) The method of claim ~~25~~⁶, further comprising:
combining the offset adjustment with the temperature compensation factor
to produce a temperature compensated offset adjustment; and storing the
combined offset adjustment with the temperature compensation factor in a one
of the first and second registers.

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Claim ~~27~~ (original) The method of claim ~~26~~⁷, further comprising storing the
temperature adjusted gain in a one of the first and second registers that does not
contain the combined offset adjustment with the temperature compensation
factor.